

CHINESE SUGAR?

ON THE ORIGIN OF HINDI CĪNĪ, « SUGAR »

The Hindi word *cīnī*, the *Hindī Śabdsāgar*¹ tells us, is either derived from *cīn*, China, plus the feminine termination *ī*, or from Sanskrit *sitā* (refined sugar according to Monier-Williams). Defining *cīnī* as granulated sugar, the entry goes on to inform us that this type of sugar was imported and therefore foreign, thus at first Hindus considered its use « irreligious » (*adharmik*), presumably polluting². The same or very similar words appear in many other Indian languages. In Nepali, for example, we have *cini* which according to Turner³ is a loan from Hindi, and in Tamil *cīṇi* which is a loan from Urdu⁴. Analogous words in several other NIA languages, however, are not considered by lexicographers as loans. The *Baṅgīya Śabdakoṣ*⁵ claims that Bengali *cini* is derived from the hypothetical Sanskrit form **cīṇīya*, « proper to China », and adds rather vaguely that the word came into use because this type of sugar was produced in China during the Christian era. Another Bengali dictionary, the *Saṁsad Bāṅgālā Abhidhān*⁶, offers a very different etymology, Chinese *ci-ni* (!), which seems an imaginative effort on the part of the compiler to explain the Chinese connection. The Assamese equivalent, *ceni*, has been explained as a loan from Bengali⁷ but while

1. Chief ed. Śyāmsundardās, Varanasi, 1965.

2. One reason for such an attitude is that sugar was believed to be refined with ashes made from animal bones. Still today some Hindus avoid refined sugar for that reason.

3. *A Comparative and Etymological Dictionary of the Nepali Language*, reprint, London, 1965.

4. *Tamil Lexcon*, Madras University, 1936.

5. H. Bandyopādhyāya, 2nd ed., New Delhi, 1966. The same etymology is found in S. SEN, *An Etymological Dictionary of Bengali: c. 1000-1800 A.D.*, Calcutta, 1971. The former qualifies his etymology with a question mark, the latter does not.

6. S. Bīśvās ed., Calcutta, 1964.

7. H. BARUA, *Hemkoṣ or an etymological dictionary of the Assamese language*, 3rd ed., Sibsagar, 1955.

this is possible, equally plausible according to G. C. Goswami⁸ is a derivation from Sanskrit* *cainika* (« Chinese ») > *cenīa* > *cenī*. One notes that even in this very brief survey of *cīnī* and its counterparts five different etymologies are suggested even though one might have supposed that the greater likelihood is that all share a common origin.

It is not only the etymology of *cīnī* which poses a problem; one can also wonder why the word was coined in the first place. Sanskrit is very well supplied with words describing the various products of the sugar cane and the stages of sugar manufacture and this stock of words has otherwise proved to be quite adequate. Sugar cane was crushed in a mill and the juice boiled in large flat kettles until it became thick; this thickened juice, *phāṇita*, was further cooked down into a heavy sirup which became semi-solid when cooled. This was *guḍa*. *Guḍa* in its turn was cooked together with plant ash, impure carbonate of soda or the like in order to remove its impurities, placed under weights to squeeze out the liquid, and from it, depending on the details of the technique and further processing, *śarkarā*, *sitā*, *matsyaṇḍī*, *khaṇḍa* or other types of sugar were made. (The terminology and the manufacturing processes vary from text to text and period to period⁹, here we are solely concerned with the range of the Sanskrit terminology). *Phāṇita* is the source of Persian *pānīd* and medieval Latin *penidium*, « the inspissated juice of the sugar cane »¹⁰. *Guḍa* was absorbed into Malay and Indonesian as *gula*, « sugar ». *Śarkarā*, as is well known, is the source of Pahlavi *śakar*, Arabic *sakkar* and the words denoting sugar in most western European languages. The NIA languages of western India, in contrast to Hindi, did not adopt *cīnī*¹¹ but like the languages above remained content with derivatives of Sanskrit *sarkara* as Marathi *sākar*/*sākhar* or Gujarati *śakar*. Sanskrit *khaṇḍa*, finally, could be the source of English « candy » through Persian *qand* and Arabic *qandi*. It is ironic that while a great part of the world drew on Sanskrit for words denoting sugar and sugar cane products, NIA languages like Hindi which are the direct descendants of Sanskrit employ a word which is ultimately of non-Indian origin.

8. In a personal communication.

9. See for example E. O. V. LIPPMANN, *Geschichte des Zuckers seit den Ältesten Zeiten bis zum Beginn der Rübenzucker-Fabrikation*, Berlin, 1929, p. 100 ff.; O. V. HIRNÜBER, *Zur Technologie der Zuckerherstellung im Alten Indien*, in « Zeitschrift der Deutschen Morgenländischen Gesellschaft », Band 121, Heft 1, Wiesbaden, 1971.

10. M. MONIER-WILLIAMS, *A Sanskrit-English Dictionary*, reprint, Oxford, 1974. In medieval times small twisted sticks of sugar called *penidia*, were a popular way of taking sugar against the common cold, C. A. WILSON, *Food & Drink in Britain from the Stone Age to recent times*, New York, 1974, p. 289. As *phāṇita* first meant the raw cane sap, then the thickened juice, and finally came to mean raw sugar as well (LIPPMANN, *op. cit.*, p. 100) this could explain this usage of the medieval Latin word; in any case here it clearly cannot mean the inspissated juice of the sugar cane.

11. According to Molesworth's *Marathi-English Dictionary*, reprint, Poona, 1975, Marathi *cinī* is « a sort of soft sugar ».

While the dictionaries may not agree about the etymology of the word, all of them state that it denotes « Chinese », « relating to China » or the like. This is another puzzle: sugar manufacturing is an Indian invention, made around 800 B.C.¹², and China never exported sugar to India in any quantity¹³; on the contrary India has always been a major exporter of sugar, thus sugar cannot be, as some lexicographers claim, Chinese in either of these senses. According to some authorities sugar cane is native to China as well as to India; others disagree. The latter are most likely correct since up to the T'ang period the Chinese contented themselves with maltose sweeteners made from germinated grain, especially barley, or used the processed sap of various water plants such as *Limnanthemum nymphaeoides* which resembled sugar cane¹⁴. Had sugar cane been available, one would have expected it to be used. When the Chinese pilgrim Hsüan Tsang traveled in India during the latter part of Harṣa's reign, he noted that Gandhāra was rich in sugar cane and that the inhabitants made « firm sugar » from its juice, a fact which struck him as remarkable¹⁵. It was shortly after his visit that the Chinese began to make their own sugar. At that time (i.e. the first half of the 7th century) a very fashionable sweet in China was the honey cake. Unfortunately these cakes had the serious disadvantage of easily disintegrating when handled so when it was discovered that they became much more durable when made with cane sugar instead of honey, large amounts of sugar began to be imported from Magadha¹⁶. Eventually the imperial government became concerned about the imbalance in trade and to remedy it Li I-piao, the ambassador sent to the court of Harṣa, was instructed to learn the Indian technique of sugar making during his stay. He did so and returned with the information in 647¹⁷. As a result of this industrial espionage the Chinese were soon manufacturing what they called *hsa t'ang*, sand sugar, and towards the end of the T'ang period they improved upon the technique and produced a superior grade of sugar called *t'ang shuang*, sugar frost. The sugar industry so expanded during the ensuing dynasty, the Sung, that one contemporary writer claimed that in parts of the Szechwan and Fukien provinces 40% of the population was involved in raising and processing sugar cane. The greater part of the production was of crude sugar and was intended for internal consumption. Nevertheless sugar, whatever its quality, did

12. HINÜBER, *op. cit.*, p. 93.

13. According to LIPPMANN, *op. cit.*, p. 264, in the later medieval period the Chinese exported sugar candy to India but this was known there under the name *miṣri*.

14. J. NEEDHAM, *Science and Civilization in China*, Cambridge, 1974, vol. 5, p. 66, note c.

15. LIPPMANN, *op. cit.*, p. 260.

16. H. SCHAFER, in K. C. Chang ed., *Food in Chinese Culture: Anthropological and Historical Perspectives*, New Haven & London, 1977, p. 109.

17. D. DEVAHUTI, *Harsha: A Political Study*, Oxford, 1970, pp. 209 & 222.

not seem to have been highly thought of by Sung gourmets; one writer sniffed that sweet things are liked by « barbarians and country folk »¹⁸. The attitude has persisted. As anyone who has dined in a Chinese restaurant is aware, one of the weaknesses of Chinese cuisine is the very limited variety of its sweet dishes. The Chinese are simply not very fond of sweets and still today far less sugar is consumed there than in most other countries; the low consumption is clearly due to indifference since South China is well suited to growing sugar cane. Not much sugar cane is grown because not much sugar cane is wanted.

Assumptions about the Chinese connections of *cīnī* seemed to be based on the fact that since *cīnī* means Chinese, sugar must, in some sense, have come from there. Still, this does not necessarily have to be the case. We have a very similar situation with Hindi *cīnā bādām*, « Chinese nut », i.e. groundnut or peanut (*Arachis hypogaea*); the groundnut does not come from China¹⁹, it did not come to India via China, nor is it, for that matter, a nut. The groundnut was domesticated in the foothills of the Andes and from there spread to other parts of South and Central America. When the Spanish and Portuguese colonized the continent they took the groundnut to Europe and their Asian possessions. The source of the Hindi name seems to be Spanish. One type of groundnut (var. *hirsuta*) cultivated in Mexico during the 16th century was known colloquially in Spanish as *chino*, the word here not used in its geographical sense but in the meaning « ugly », « rough » in reference to the wrinkled appearance of the nut resulting from the prominent veins and ridges on its pod. The Spanish brought the groundnut to the Malay archipelago either between 1521 and 1529, or after 1579. Although the variety they introduced was not *hirsuta*, the colloquial name stuck and the Malays dubbed it *kachang china*, Chinese bean²⁰. Thus when the Indians became acquainted with it via Malaya, they quite understandably called the new « nut » *cīnā bādām*.

Since the Indians pioneered sugar technology and possessed in Sanskrit a more than adequate stock of terms for sugar and sugar products, they must have had a very good reason for coining this new word; such a term could only have been needed if a new, significantly different, type of sugar had appeared for which it was felt that a new and special designation was necessary. Dating the word is a problem since surviving texts in NIA languages are not as old or as reliable as one would wish. *Cīnī* does not appear in Tulasīdās or Mohammad Jāyāsī but it can be found in the works of Sūrdās (c. 1503-1563). In Bengali *cīnī* is well

18. MICHAEL FREEMAN, in K. C. Chang, *op. cit.*, p. 147.

19. In an earlier book (*Ancient China*, New Haven, 1961) K. C. Chang claims that peanut remains in China date back to 3000 B.C., but considering the subsequent evidence against the claim, he backs away from it in *op. cit.*, pp. 27-8.

20. A. KRAPOVICKAS, *The Origin, Variability and Spread of the Groundnut (Arachis hypogaea)*, in P. J. Ucko & C. W. Dimbley, eds., *The Domestication and Exploitation of Plants and Animals*, London, 1969, p. 437.

established in the 16th century since it is frequently used in compounds such as *cininārikela*, « coconut sweet », *cinipāna*, « sweet drink », etc. in the *Caṇḍīmaṅgal* of Mukundarām (before 1560). The earliest appearance of the word is, apparently, in the *Varṇaratnākara* of the Maithili poet Jyotirīśvara which was written in the first quarter of the 14th century²¹. Thus it seems that the word came into use sometime around the end of the 13th century if not earlier. Is there any change or advance in sugar making techniques which could have resulted in the appearance of a « new » type of sugar in India around this time? On this point there is no doubt: there was a significant change.

Indian sugar technology had been taken to the West long before its introduction into China. In the classical world cane sugar remained pretty much a novelty much prized for its reputed medicinal properties; afterwards, however, the cultivation of sugar cane spread and improvements were made in its manufacture. One of the earliest of such improvements was that made around 700 A.D. in the Euphrates region where Nestorian monks devised a superior refining method which produced a cleaner, whiter sugar. In the following centuries the center for innovations in refining technology shifted to Egypt. The Egyptians were highly skilled in dying, glassmaking, silk weaving and metalworking — the medieval equivalent of a chemical industry — and they soon applied their talents to sugar refining. The result of their efforts was a white, granulated sugar not much different than the product we know today²². Egypt so dominated the sugar industry that it twice attempted to set up a monopoly; once under the sultan Hakim (996-1021) and much later under the sultan Basbai (1422-38). Egyptian rock sugar or sugar candy was of such a high quality that it was even exported to India where in Hindi and Urdu it became known as *miṣrī*, Egyptian (sugar), from *miṣr* Old Cairo or Egypt. From Egypt the knowledge of the new refining techniques were taken to the East. According to Marco Polo before the Mongols conquered Unguen in China the people of that city knew nothing of fine sugar (*zucchero bello*) but once he had occupied it, Kublai Khan brought in « Babylonians » who taught the Chinese how to manufacture it. These Babylonians, *uomini di Bambillonía*, were not from the long forgotten Babylon of Iraq but from Bābālājūn, the oldest quarter of Cairo, which in medieval Italy was known as Bambillonía d'Egitto²³. They were, in other words, Egyptian sugar-making experts.

The same skills seem to have reached northern India, then ruled by Muslim Turks, around the same time. The Persian historian Ferishta (c. 1300) reported that the sultans had established a large sugar market in Delhi and encouraged the expansion and improvement of the Indian

21. Ed. by S. K. Chatterji, « Bibliotheca Indica », no. 262, Calcutta, 1942, p. lxiii. This was brought to my attention by Dr. Stuart McGregor.

22. LIPPMANN, *op. cit.*, p. 222.

23. *Ibid.*, p. 221 ff.

sugar industry²⁴. This was a natural measure for if the sultans wanted to compete with Egypt in the Middle-Eastern markets they would have to offer a product of comparable quality. When the Portuguese arrived in India two centuries later they found good quality sugar in large quantities. Duarte Barbosa, writing in 1518, noted that « good white sugar » was plentiful in western India and Bengal but added that the Indians did not know how to make it into loaves²⁵. This sugar was also exported to Arabia, Ormuz and Aden.

If we compare *cīnī* etc. with derivatives of *śarkarā* and *guḍa* in NIA languages, we notice that the former tends to denote white, or refined sugar while the Sanskrit derivatives correspond to crude, brown or country sugar.

Hindi *śakkar*: crude sugar²⁶

Bihari *sakkar*, *saṅkar*: raw sugar²⁷

Oriya —

Assamese *guṛ*: raw or refined sugar²⁹

Nepali *sakkhar*: coarse brown sugar³⁰

cīnī: granulated sugar

—

cīnī: refined sugar²⁸

cenī: refined *guṛ*

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In *Hobson-Jobson*³¹ under the entry « sugar » one notes the following line: « In India now *chīnī* (cheeny) (Chinese) is applied to the white kinds of common sugar ». *Śarkarā*, in contrast, is the ultimate source of Anglo-Indian jaggery, through Portuguese *jagara* in its turn adapted from Malayalam *cakkarā*. Strictly speaking jaggery is dark brown palm sugar but it is also freely used for crude sugar in general.

Cīnī, then, was introduced in order to differentiate the whiter, more highly refined sugar made with the new techniques pioneered by the Egyptians from the traditional sugars. It has been argued that white sugar was produced in ancient India; Sanskrit *śitā*, « pale », « white », used as the name of a grade or variety of sugar, has been pointed out as evidence of this. Samples of ancient sugar are, of course, not available for examination but whiteness, it should be noted, is a very relative concept. The whiteness of any grade of sugar depends on the amount of the impurities removed in the refining process: the less the level of impurities the whiter the sugar. In this context « white » means white in comparison to inferior grades of sugar. We can compare this situation with the very similar one in the case of bread in ancient Rome and medieval Europe. In both societies white bread made from the very

24. *Ibid.*, p. 641.

25. *The Book of Duarte Barbosa*, M. L. Dames trans., « The Hakluyt Society », second series, XLIV, London, 1918, p. 188.

26. *Kaccī cīnī*. ŚYĀMSUNDARĀS, *op. cit.*

27. TURNER, *Com. Dic.*

28. B. PARHI, *Bṛhat Oriā Abhidhān*, Cuttack, 1971.

29. *Parīṣkāra karā guṛ, pāgi nirmmal karā guṛ*, BARUA, *op. cit.*

30. TURNER, *Nep. Dic.*

31. H. Yule & A. C. Burnell, new ed., London, 1903.

finest grades of wheat flour was destined for the tables of the nobility; in social situations the lower one's position in society the darker the bread one was to be served. In ancient Rome the equivalent of « to know one's station » was « to know the color of one's bread ». Despite this great concern with the whiteness of bread during a great part of European history we now know that the stone milling techniques of Rome and medieval Europe were incapable of producing flour which could be baked into a bread which we today would recognize as white³². At best the finest « white » bread of either society would be in our eyes of a dirty yellow color. It was, however, very obviously white when one compared it to the cruder breads destined for the lower orders. In the same way ancient Indian sugars were white when contrasted with those prepared by inferior processes.

While we can see how the word *cīnī* had been coined to designate this new quality sugar the question remains of why this particular term was selected. The « new » sugar did not itself have anything at all to do with China but since there seems to be no other source for it, we must assume that it does in fact correspond to « Chinese », « having to do with China » or the like. The problem, then, is to ascertain why this white sugar came to be associated with China. In the period after its introduction *cīnī* must have been relatively scarce, very expensive and a delicacy which only could be sampled by the well-to-do. This perhaps explains why the word does not appear in many early texts: it was very much a novelty restricted to a small group in the upper reaches of society. Cruder sugar manufactured in the village was cheap and everywhere available; *cīnī* was not only a luxury but in many ways a very unnecessary one. What did Indians, more precisely the wealthier Indians who were the consumers of *cīnī*, associate with China? What things Chinese were familiar to them? The most obvious item is that which was probably the most familiar Chinese export to India: porcelain. Because India had never developed a true ceramic art itself it had imported glass, pottery and porcelain throughout its history; in ancient times a prime source was Rome; during the Muslim period the source was China. Chinese porcelain was of very high quality and was imported in large quantities; when Europe opened up its trade with China it did the same as is made clear by the English term « china » or « chinaware » meaning fine porcelain. We can see the same association in Indian languages: *cīnī* also means porcelain in Urdu, Nepali and Gujarati. The Chinese made their porcelain from a fine clay called kaolin or simply china clay. Again we see the same in NIA languages: Hindi *cīnī miṭṭī*, Marathi *cīnī māṭī*, Bengali *cinā māṭi* etc., all « Chinese clay »; chinaware is known as « dishware of china clay » (*cīnī miṭṭī kī bartan* etc.). Kaolin is white so the porcelain made from it is white. It is not difficult to see how the

32. L. A. MÖRITZ, *Grain-Mills and Flour in Classical Antiquity*, Oxford, 1958, p. 154 ff.

association Chinese/white could be transferred from one white, exotic luxury product introduced from abroad — porcelain to another white exotic luxury product — sugar. What distinguished the new sugar from the conventional sugar was, after all, its whiteness and the adjective *cīnī* had strong associations with whiteness. Most likely the term first appeared as *cīnī śakkar* or something similar and later the noun was dropped in the same way that *cīnī* alone came to mean porcelain in Nepali and Gujarati.

It was noted in the beginning of this paper that a number of different etymologies have been suggested for *cīnī* and its NIA counterparts. Since the various forms of the word were all applied to the same product around the same time it is only logical to assume that all come from a common source. The most likely source would be the language which was spoken by those people who first came into contact with the new product and hence first felt the need for a new term, i.e. those people who were able to afford imported porcelain and fine sugar. The most likely candidates naturally are the members of the ruling élite who were at that time Muslims. Not only did they control a great part of the wealth of North India but their superior cultural contacts with the Middle East would ensure their becoming rapidly acquainted with any innovations originating there. In contrast the Hindus with their complex dietary legislation would tend to be suspicious of new food products and, as the *Hindī Sabdsāgar* noted, they were indeed initially doubtful of *cīnī*. The official language of North India's Muslim rulers was Persian. « Chinese » corresponds to Persian *cīnī*, china clay is *khāl-i-cīnī*, and chinaware *zoruf-i-cīnī* or simply *cīnī*. The Persians, moreover, apparently made the same association as the Indians, for a subsidiary meaning of *cīnī* is « white sugar candy »³³. Had Persian influenced NIA *cīnī* this can explain much of the etymological confusion: in Hindi the word was identified with the feminine form of the adjective *cīnā*, in Bengali the word was simply adopted as it was. This could also help explain why the word failed to gain the same currency in western India: it remained in Hindu control for well over a century after the north and north-east had fallen to the Muslims, precisely during that century during which the new type of sugar was introduced.

33. F. STEINGASS, *A Comprehensive Persian-English Dictionary*, 5th imp., London, 1963.